

REMARKS

In an Office Action dated April 15, 2010, claims 1, 3-6, 8, 9, 14-16, 22 and 23 were rejected under 35 U.S.C. § 103(a). In response to the Office Action, claims 1, 5, 16, and 23 are amended and claim 6 is canceled. The application, with pending claims 1, 3-5, 7-16, 22 and 23, including withdrawn claims 7 and 10-13 is in condition for allowance, and notice to that effect is respectfully requested.

Claims 1, 3-6, 8, 9, 14-16, 22 and 23 were rejected as obvious over the combination of O'Connell ("O'Connell", USP 5,678,637) in view of Nielsen ("Nielsen", USP 6,425,537).

"All words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03. With this Amendment, independent claims 1 and 16 have been amended to recite an outlet extending from a central body cavity through a wall of a nozzle body, a distal outer portion of the outlet is inclined to extend non-radially with respect to the central axis of the cavity. This arrangement imparts/induces both a radial force and a tangential force during a discharge of a fluid/extinguishant therefrom such that a rotational movement of the fluid/extinguishant within a fluid-filled volume surrounding the nozzle body is induced.

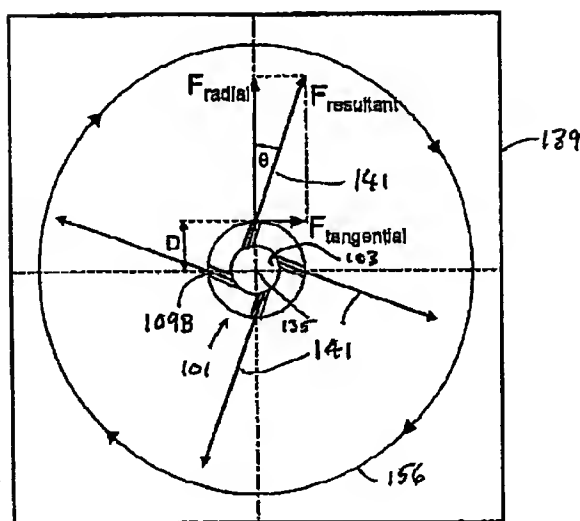
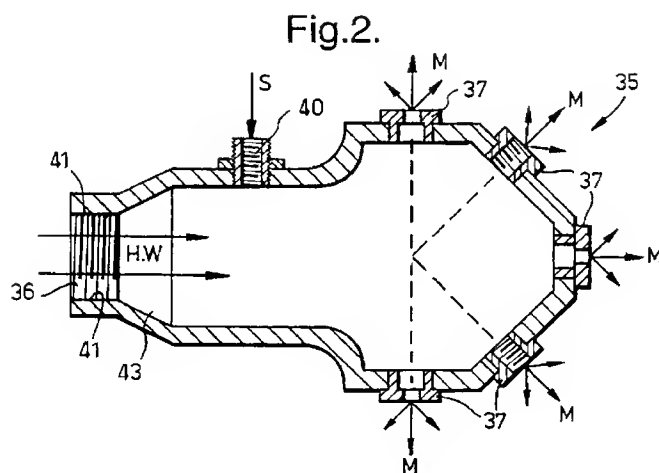


Fig. 6

Applicants' FIGS. 6 and 12, and paragraphs 37-45 of the specification further illustrate and explain this recitation. FIG. 6 (reproduced above) and paragraphs 37 and 41-45 are particularly informative. In particular, inclination angle theta (FIG. 6) with respect to central cavity axis 135 imparts a radial force (F_{radial}) and a tangential force ($F_{\text{tangential}}$) which induces rotational movement of the fluid/extinguishant 156.

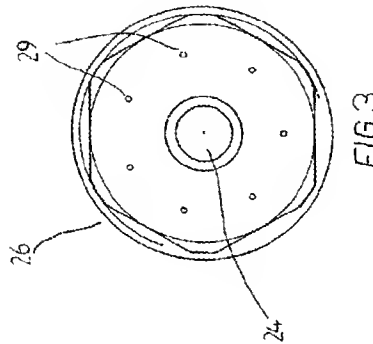
The combination of O'Connell and Nielsen does not disclose these elements. O'Connell discloses a nozzle with outlets that extend radially through the nozzle's body. Thus, the outlets if extended would pass through the central axis of the nozzle and would not be inclined therefrom as claimed by the Applicants. This is more clearly understood after reviewing FIG. 2 of O'Connell (reproduced below).



Additionally, O'Connell has no teaching or suggestion of imparting a tangential force to an extinguishant/fluid as claimed by the Applicants. Nor does O'Connell teach or suggest inducing rotational movement of the fluid/extinguishant upon exit from the outlet as claimed by the Applicants.

Nielsen discloses a nozzle head with a plurality of passages for discharging a liquid in atomized form. In particular, helical grooves 35 create internal vortices to atomize the liquid but then liquid passes to openings 29. However, all the outlets 29 and 24 Nielsen discloses have distal portions (openings 29 and 24) that are parallel to or aligned with the central axis of the nozzle. (See

FIGS. 2 and 3 of Nielsen, FIG. 3 reproduced below). Thus, the outlets are not inclined to extend non-radially with respect to the central axis of the cavity as claimed by the Applicants.



Similar to O'Connell, Nielsen has no teaching or suggestion of imparting a tangential force to an extinguishant/fluid to help induce rotational movement of the fluid/extinguishant upon exit from the outlet as claimed by the Applicants. In fact, Column 5, lines 22-40 and FIG. 1 of Nielsen disclose that extinguishant spreads in a fan shape upon discharge.

Because the combination of O'Connell and Nielsen fails to disclose, teach, or suggest all the limitations of independent claims 1 and 16, those claims are allowable, and rejection of those claims under 35 U.S.C. § 103(a) is therefore improper. Claims 3-5, 7-15 and 22-23 depend from claims 1 and 16, respectively, and are allowable therewith. See M.P.E.P. § 2143.03.

CONCLUSION

Claims 1, 5, 16, and 23 are amended and claim 6 is canceled. In view of the foregoing, pending claims 1, 3-5, 7-16, 22 and 23, including withdrawn claims 7 and 10-13, are in condition for allowance. A notice to that effect is respectfully requested.

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Application No.: 10/822,190

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The Commissioner is hereby authorized to charge any additional fees which may be required under 37 C.F.R. 1.16 and 1.17, or credit any overpayment, to Deposit Account No. 11-0982.

Respectfully submitted,

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